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**PATENT** 

wherein:

ring B and ring F, independently, and each together with the carbon atoms to which they are attached, are selected from the group consisting of:



- a) an unsaturated 6-membered carbocyclic aromatic ring in which from 1 to 3 carbon atoms may be replaced by nitrogen atoms;
- b) an unsaturated 5-membered carbocyclic aromatic ring; in which, optionally, either
  - 1) one carbon atom is replaced with an oxygen, nitrogen, or sulfur atom;
  - 2) two carbon atoms are replaced with a sulfur and a nitrogen atom, an oxygen and a nitrogen atom, or two nitrogen atoms; or
  - 3) three carbon atoms are replaced with three nitrogen atoms;

R1 is selected from the group consisting of:

a) H, substituted or unsubstituted alkyl having from 1 to 4 carbons, substituted or unsubstituted aryl, substituted or unsubstituted arylalkyl, substituted or unsubstituted heteroaryl, or substituted or unsubstituted heteroarylalkyl;

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- b) -C(=O)R<sup>9</sup>, where R<sup>9</sup> is selected from the group consisting of alkyl, aryl and
- O(CH<sub>2</sub>)<sub>p</sub>NR<sup>11</sup>R<sup>12</sup>, wherein p is from 1 to 4; and wherein either
  - 1) R<sup>11</sup> and R<sup>12</sup> are each independently selected from the group consisting of H and alkyl having from 1 to 4 carbons; or
  - 2) R<sup>11</sup> and R<sup>12</sup> together form a linking group of the formula - $(CH_2)_2$ - $X^1$ - $(CH_2)_2$ -, wherein  $X^1$  is selected from the group consisting of -O-, -S-, and -CH<sub>2</sub>-;

R<sup>2</sup> is selected from the group consisting of H, alkyl having from 1 to 4 carbons, -OH, alkoxy having from 1 to 4 carbons, -OC(=O)R<sup>9</sup>, -OC(=O)NR<sup>11</sup>R<sup>12</sup>, -O(CH<sub>2</sub>)<sub>p</sub>NR<sup>11</sup>R<sup>12</sup>, -O(CH<sub>2</sub>)<sub>p</sub>Ok<sup>10</sup>, substituted or unsubstituted arylalkyl having from 6 to 10 carbons, and substituted or unsubstituted heteroarylalkyl:

R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are each independently selected from the group consisting of:

- a) H, aryl, heteroaryl, F, Ch, Br, I, -CN, CF<sub>3</sub>, -NO<sub>2</sub>, -OH, -OR<sup>9</sup>,  $-O(CH_2)_pNR^{11}R^{12}$ ,  $-OC(=O)NR^{11}R^{12}$ ,  $-O(CH_2)_pOR^{10}$ ,  $-CH_2OR^{10}$ ,  $-CH_$  $NR^{11}R^{12}$ ,  $-NR^{10}S(=O)/R^9$ ,  $-NR^{10}C(=O)R^9$ ,
- b)  $-CH_2OR^{14}$ , wherein  $R^{14}$  is the residue of an amino acid after the hydroxyl group of the carbox pl group is removed;
- c)  $-NR^{10}C(=O)NR^{11}R^{\frac{1}{2}}$ ,  $-CO_2R^2$ ,  $-C(=O)R^2$ ,  $-C(=O)NR^{11}R^{12}$ ,  $-CH=NOR^2$ ,  $-CO_2R^2$ , -CH=NR<sup>9</sup>, -(CH<sub>2</sub>)<sub>p</sub>NR<sup>11</sup>R<sup>12</sup>, -(CH<sub>2</sub>)<sub>p</sub>NHR<sup>14</sup>, or -CH=NNR<sup>2</sup>R<sup>2A</sup> wherein  $R^{2A}$  is the same as R<sup>2</sup>;
- d)  $-S(O)_{v}R^{2}$ ,  $-(CH_{2})_{p}S(O)_{v}R^{9}$ ,  $-CH_{2}S(O)_{v}R^{14}$  wherein y is 0, 1 or 2;
- e) alkyl having from 1 to 8 carbons, alkenyl having from 2 to 8 carbons, and alkynyl having 2 to 8 carbons, wherein
  - 1) each alkyl, alkenyl, or alkynyl group is unsubstituted; or





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2) each alkyl, alkenyl or alkynyl group is substituted with

1 to 3 groups selected from the group consisting of aryl having from 6 to 10 carbons, heteroaryl, arylalkoxy, heterocycloalkoxy, hydroxylalkoxy, alkyloxyalkoxy, hydroxyalkylthio, alkoxy-alkylthio, F/Cl, Br, I, -CN, -NO<sub>2</sub>, -OH, -OR<sup>9</sup>, -  $X^2(CH_2)_pNR^{11}R^{12}$ , - $X^2(CH_2)_pC(=O)NR^{11}R^{12}$ , - $X^{2}(CH_{2})_{p}OC(=O)NR^{11}R^{12}$ ,  $-X^{2}(CH_{2})_{p}CO_{2}R^{9}/X^{2}(CH_{2})_{p}S(O)_{v}R^{9}$ , - $X^2(CH_2)_pNR^{10}C(=O)NR^{11}R^{12}$ ,  $-OC(=O)R^9$ ,  $-OCONHR^2$ , -O-tetrahydropyranyl, -NR<sup>11</sup>R<sup>12</sup>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>9</sup>, -NR<sup>10</sup>C(=O)NR<sup>11</sup>R<sup>12</sup>, -NHC(=NH)NH<sub>2</sub>, NR<sup>10</sup>C(=O)R<sup>9</sup>,  $-NR^{10}S(O)_2R^9$ ,  $-S(O)_yR^9$ ,  $-CO_2R^2$ ,  $-C(=0)NR^{11}R^{12}$ ,  $-C(=O)R^2$ ,  $-CH_2OR^{10}$ ,  $-CH_2OR^{10}$ CH=NNR $^2$ R $^{2A}$ , -CH=NOR $^2$ , -CH=NR $^9$ // -CH=NNHCH(N=NH)NH $_2$ , -

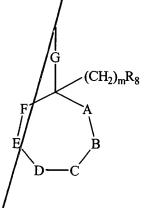
S(=O)<sub>2</sub>NR<sup>2</sup>R<sup>2A</sup>, -P(=O)(OR<sup>10</sup>)<sub>2</sub>, -OR<sup>14</sup>/and a monosaccharide having from 5 to 7 carbons wherein each hydroxyl group of the monosaccharide is

independently either unsubstituted  $\phi$ r is replaced by H, alkyl having from 1 to 4 carbons, alkylcarbonyloxy having from 2 to 5 carbons, or alkoxy having

from of 1 to 4 carbons;

 $X^2$  is O, S, or  $NR^{10}$ ;

R<sup>7</sup> is



wherein:

m is 0-4;

G is a bond; or alkylene having 1 to 4 carbons, wherein the alkylene group is unsubstituted, or substituted with NR<sup>11A</sup>R<sup>12A</sup> or OR<sup>19</sup>;

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 $R^{11A}$  and  $R^{12A}$  are the same as  $R^{1}$  and  $R^{12}$ ;

R<sup>19</sup> is selected from the group consisting of H, alkyl, acyl, and C(=O)NR<sup>11A</sup>R<sup>12A</sup>;

 $R^8$  is selected from the group consisting of O(C=O)NR<sup>11</sup>R<sup>12</sup>, -CN, acyloxy, alkenyl, -O-CH<sub>2</sub>-O-(CH<sub>2</sub>)<sub>2</sub>-O-CH<sub>3</sub>, halogen and R<sup>1A</sup> wherein R<sup>1A</sup> is the same as R<sup>1</sup>;

A and B are independently selected from the group consisting of O, N, S, CHR<sup>17</sup>,

C(OH)R<sup>17</sup>, C(=O), and CH<sub>2</sub>=C; or A and B together can form -CH=CH-;

C and D are independently selected from the group consisting of a bond, O, N, S, CHR<sup>17</sup>, C(OH)R<sup>17</sup>, C(=O) and CH,=C:

E and F are independently selected from the group consisting of a bond, O, N, S, C(=0), and  $CH(R^{17})$ ;

R<sup>17</sup> is selected from the group consisting of H, substituted or unsubstituted alkyl, alkoxycarbonyl, and substituted or unsubstituted alkoxy; wherein:

- 1) ring J contains 0 to 3 ring heteroatoms;
- 2) any two adjacent hydroxyl groups of ring J can be joined in a dioxolane ring;
- 3) any two adjacent ring carbon atoms of ring J can be joined to form a fused aryl or heteroaryl ring;
- 4) any two adjacent ring nitrogen atoms of ring J can be joined to form a fused heterocyclic ring which can be substituted with 1 to 3 alkyl or aryl groups;

provided that:

- 1) ring J contain at least one carbon atom that is saturated;
- 2) ring J not contain two adjacent ring O atoms;
- 3) ring J contains a maximum of two ring C(=O) groups;
- 4) when G is a bond, ring J can be heteroaryl;

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Q is selected from the group consisting of O, S/NR<sup>13</sup>, NR<sup>7A</sup> wherein R<sup>7A</sup> is the same as R<sup>7</sup>, CHR<sup>15</sup>, X<sup>3</sup>CH(R<sup>15</sup>), and CH(R<sup>15</sup>)X<sup>3</sup> wherein X<sup>3</sup> is selected from the group consisting of BO-, -S-, -CH<sub>2</sub>-, NR<sup>7A</sup>, and NR<sup>13</sup>;

W is selected from the group consisting of  $CR^{18}R^7$  and  $CHR^{50}$  where  $R^{50}$  is alkyl having from 1 to 4 carbons, -OH, alkoxy having from 1 to 4 carbons, -OC(=O) $R^9$ , -OC(=O) $R^{11}R^{12}$ , -O(CH<sub>2</sub>) $_pNR^{11}R^{12}$ , -O(CH<sub>2</sub>) $_pOR^{10}$ , substituted or unsubstituted arylalkyl having from 6 to 10 carbons, and substituted or unsubstituted heteroarylalkyl;

 $R^{13}$  is selected from the group consisting of H,  $-SO_2R^9$ ,  $-CO_2R^9$ ,  $-C(=O)R^9$ ,  $-C(=O)NR^{11}R^{12}$ , alkyl of 1-8 carbons, alkenyl having 2-8 carbons, and either

1) the alkyl, alkenyl, or alkynyl group is unsubstituted; or

2) the alkyl, alkenyl, or alkynyl group independently is substituted with 1 to 3 groups selected from the group consisting of aryl having from 6 to 10 carbons, heteroaryl, arylalkoxy, heterocycloalkoxy, hydroxylalkoxy, alkyloxy-alkoxy, hydroxylalkoxy, alkyloxy-alkoxy-alkoxy, hydroxylalkoxy, alkyloxy-alkoxy-alkoxy-alkoxy, hydroxylalkoxy, alkyloxy-alkoxy-alkoxy-alkoxy, hydroxylalkoxy, alkyloxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-alkoxy-a

R<sup>15</sup> is selected from the group consisting of H, OR<sup>10</sup>, SR<sup>10</sup>, R<sup>7A</sup>, and R<sup>16</sup>; R<sup>16</sup> is selected from the group consisting of alkyl of 1 to 4 carbons; phenyl; naphthyl;

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arylalkyl having 7 to 15 carbons,  $-SO_2R^9$ ,  $-CO_2R^9$ ,  $-C(=O)R^9$ , alkyl having 1-8 carbons; alkenyl having 2 to 8 carbons, and alkynyl having 2 to 8 carbons, wherein

1) each alkyl, alkenyl, or alkynyl group is unsubstituted; or

2) each alkyl, alkenyl, or alkynyl group is substituted with 1 to 3 groups selected from the group consisting of aryl having from 6 to 10 carbons, heteroaryl, arylalkoxy, heterocycloalkoxy, hydroxylalkoxy, alkyloxy-alkoxy, hydroxyalkylthio, alkoxy-alkylthio, F/Cl, Br, I, -CN, -NO<sub>2</sub>, -OH, -OR<sup>9</sup>, - X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>NR<sup>11</sup>R<sup>12</sup>, -X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>C(=O)NR<sup>11</sup>R<sup>12</sup>, -X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>OC(=O)NR<sup>11</sup>R<sup>12</sup>, - X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>CO<sub>2</sub>R<sup>9</sup>, X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>S(O)<sub>y</sub>R<sup>9</sup>, X<sup>2</sup>(CH<sub>2</sub>)<sub>p</sub>NR<sup>10</sup>C(=O)NR<sup>11</sup>R<sup>12</sup>, -OC(=O)R<sup>9</sup>, - OCONHR<sup>2</sup>, -O-tetrahydropyranyl, -NR<sup>11</sup>R<sup>12</sup>, -NR<sup>10</sup>CO<sub>2</sub>R<sup>9</sup>, -NR<sup>10</sup>C(=O)NR<sup>11</sup>R<sup>12</sup>, -NHC(=NH)NH<sub>2</sub>, NR<sup>10</sup>C(=O)R<sup>9</sup>, NR<sup>10</sup>S(O)<sub>2</sub>R<sup>9</sup>, -S(O)<sub>y</sub>R<sup>9</sup>, -CO<sub>2</sub>R<sup>2</sup>, -C(=O)NR<sup>11</sup>R<sup>12</sup>, -C(=O)R<sup>2</sup>, -CH<sub>2</sub>OR<sup>10</sup>, -CH<sub>2</sub>NNR<sup>2</sup>R<sup>2A</sup>, -CH<sub>2</sub>NOR<sup>2</sup>, -CH<sub>2</sub>NR<sup>9</sup>, -CH<sub>2</sub>NR<sup>9</sup>, -CH<sub>2</sub>NR<sup>10</sup>, -CH<sub>2</sub>NNHCH(N=NH)NH<sub>2</sub>, -S(=O)<sub>2</sub>NR<sup>2</sup>R<sup>2A</sup>, -P(=O)(OR<sup>10</sup>)<sub>2</sub>, -OR<sup>14</sup>, and a monosaccharide having from 5 to 7 carbons wherein each hydroxyl group of the monosaccharide is independently either unsubstituted or is replaced by H, alkyl having from 1 to 4 carbons, alkylcarbonyloxy having from 2 to 5 carbons, or alkoxy having from of 1/to 4 carbons;

R<sup>18</sup> is selected from the group consisting of R<sup>2</sup>, thioalkyl of 1-4 carbons, and halogen; A<sup>1</sup> and A<sup>2</sup> are selected from the group consisting of H, H; H, OR<sup>2</sup>; H, -SR<sup>2</sup>; H,

 $N(R^2)_2$ ; and a group wherein  $A^1$  and  $A^2$  together form a moiety selected from the group consisting of =0, =S, and  $=NR^2$ ;

 $B^1$  and  $B^2$  are selected from the group consisting of H, H; H,  $-OR^2$ ; H,  $-SR^2$ ; H,  $N(R^2)_2$ ; and a group wherein  $B^1$  and  $B^2$  together form a moiety selected from the group consisting of =O, =S, and  $=NR^2$ ; with the proviso that at least one of the pairs  $A^1$  and  $A^2$ , or  $B^1$  and  $B^2$ , form =O;

with the proviso that when Q is NH or NR<sup>7A</sup>, and in any R<sup>7</sup> or R<sup>7A</sup> group m is 0 and G is a bond, R<sup>8</sup> is H, and R<sup>7</sup> or R<sup>7A</sup> contains one ring hetero oxygen atom at position A in a 5- or

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6-membered ring, then B cannot be CHR<sup>17</sup> where R<sup>17</sup> is substituted or unsubstituted alkyl; and

with the further provise that the compound of Formula I contains one  $R^7$  or  $R^{7A}$  group or both an  $R^7$  and  $R^{7A}$  group.

41. (Amended) The compound of claim 37 wherein the constituent variables of the compounds of Formula II are selected in accordance with the following table:

				17				
A1A2	B1B2	R3	A/h	В	C	D	Е	F
H2	O	Н //	<b>∕</b> o ∥	CH2	bond	bond	bond	hond
H2	Ο	Н	o *	CH2		bond		
H2	O	Н	0	CH2		bond		
H2	O	Н /	C(OH		CH2			
H2	0	3-Br	9	CH2		bond		
H2	0	3-CH2OCH2-CH3	0	CH2				
H2	Ŏ	3-CH2QCH2-CH2QCH3	•			bond		
H2	Ö		0	CH2		bond		bond
	0	H	O	CH2	CH2	CH2	CH2	bond
H2	<u> </u>	<u>H</u> *	CH2	0	CH2	CH2	CH2	bond

64. (Amended) A pharmaceutical composition for treating prostate disorders comprising a compound of claim 1 and a pharmaceutically acceptable carrier.

73. (Amended) A method for treating prostate disorders which comprises administering to a host in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1.

Please add new claim 95:

--95. (New) The compound of claim 21 wherein  $R^1$ ,  $R^3$ ,  $R^4$  and  $R^6$  are each H;  $A_1,A_2$  is H,H;  $B_1,B_2$  is =0, Q is  $NHC)R^5$  is H or alkoxy; W is  $CR^{18}R^7$  where  $R^{18}$  is H; G is a bond; m is 1;  $R^8$  is OH or  $-C(=0)R^9$  where  $R^9$  is alkyl; A is O; B, C and D are each  $CHR^{17}$  where  $R^{17}$  is H; and E and F are each a bond.--